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SOCIAL STATUS AND PERSONALITY TRAITS*

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Abstract

In this study we provide direct evidence on the relationship between social status and personality traits. Using survey data from the 2006-2012 waves of the HRS, we show that individuals' self-perceived social status is associated with all the "Big Five" personality traits, after controlling for observable characteristics that arguably reflect one's actual status. We also construct an objective status measure that in turn is influenced by personality traits. Objectively measured status is positively but not highly correlated with its subjective counterpart and, when incorporated in a regression specification, still leaves room for direct effects of personality traits on status perception.

Keywords: Subjective Social Status; Objectively Measured Social Status; Personality Traits.
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1. Introduction

While the standard economics approach posits that individuals should care only about their *absolute* levels of consumption, income or wealth, history as well as mounting empirical evidence suggest otherwise: in many parts of the world, human societies are organized in hierarchical structures, with many individuals caring about their *relative* rank in the social ladder. Interpersonal comparisons and the quest for socio-economic status are important social phenomena: individuals driven by ranking concerns aspire to achieve higher positions in social ranking (Bault et al., 2008) and get disutility if they are surrounded by others who have more than they do (Carlsson et al., 2007).

Although the terminology varies across disciplines and studies, the search for a better relative position in society is a classical topic in social sciences such as sociology (e.g., Veblen, 1899; Hollingshead, 1975) and social psychology (Festinger, 1954; Loewenstein et al., 1989) and, in the last decades, starting from Duesenberry's (1949) seminal work, it has been increasingly attracting the interest of economists. According to Frank (1999), the quest for status is a "deep-rooted and ineradicable element in human nature" (p. 145) and, as pointed out by Postlewaite (1998), our desire to ascend to the top of a social hierarchy may have had selection value over the course of human evolution.

The existing economics literature shows that an individual's social status significantly influences her subjective well-being and is correlated with her behavior in various domains, including employment decisions, violent crime and education performances (see Section 2 on this). In this regard, a central point is that, as far as individuals driven by a preference for status are concerned, what arguably matters most for their choices and subjective well-being is not the 'true' position they occupy in the social ladder, but *what they perceive* as their own place in the ranking. And it is plausible to believe that one's perceived (or subjective) socio-economic status, i.e., how objective features associated with one's status are subjectively filtered, *need not coincide* with an objective measure of relative position in society.

However, despite its importance, the distinction between objective status and its subjective counterpart has received scant attention so far in the recent economics literature on the theme: most empirical studies exclusively look at objective measures of status, e.g., by considering relative incomes (Gerdtham and Johannesson, 2004; Luttmer, 2005) or occupational prestige (Di Tella et al., 2010).[1] In contrast, a key feature of our paper is that it empirically assesses individuals' social

[1] Senik (2009) and Clark et al. (2013) are relevant exceptions. Clark et al.'s (2013) work shows that self-reported income comparison is important and interestingly suggests that both whom people compare with and the intensity of

status both subjectively and objectively and focuses on the relationship between these two measures. We are able to do this by exploiting a question contained in our dataset (the US *Health and Retirement Study*, waves 2006-2012) specifically dealing with one's own status perception.

Our central hypothesis is that subjective socio-economic status may be (subconsciously but significantly) biased by individual-specific, non-cognitive features such as one's *personality traits*. In particular, by referring to the established "Big Five" model of personality traits (Costa and McCrae, 1992), that summarizes personality in five comprehensive traits (i.e., openness, conscientiousness, extraversion, agreeableness and neuroticism), we seek to discover whether, how and to what extent individuals' personality characteristics may distort their perception of their own position on the social ladder, affecting the intrapersonal process through which objective dimensions of status are subjectively filtered.

Next, we construct an objective measure of social status based on information on four observable variables such as income, wealth, education and occupation that (a) arguably reflect one's *actual* position on the social ladder and (b) closely mirror the status dimensions explicitly mentioned in the question on self-perceived social status that is central in our analysis. Since also objectively measured social status is likely to be significantly influenced by personality traits, we examine this relationship separately and we account for it when linking subjective and objective measures directly. Our findings indicate that objectively measured social status is positively but not highly correlated with its subjective counterpart and, when incorporated in a regression specification, still leaves room for significant direct effects of all the Big Five personality traits on one's own status perception. On the whole, then, this study focuses on the complex, intricate relationships between social status and personality traits depicted in Figure 1.

The remainder of the paper is structured as follows. Section 2 contains a review of the relevant strands of economics literature on social status and personality traits. In Section 3 we present the data that we use to explore this topic. Section 4 contains the main findings of our analysis and Section 5 concludes. The Appendix provides details on the construction of some key variables.

FIGURE 1 ABOUT HERE

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income comparisons are largely culture-specific: while in Japan people compare first to friends and then to work colleagues, this order is inverted in Europe; next, the intensity of income comparisons is higher in Japan than in Europe.

2. Related literature

By looking at the links between social status and personality traits, this paper ties together two strands of economics literature that so far have been developing separately from each other. The first is what is by now a large line of literature on status-seeking behavior and its relationship with economically relevant variables. The second is the young but rapidly expanding research area examining the impact of non-cognitive factors traditionally investigated in psychology (i.e., personality traits) on a variety of outcome variables. The following two sub-sections contain a selective review of these two streams of literature.

2.1. Social status

Status-seeking behavior has been increasingly attracting the interest of economists, who investigated the topic both theoretically and empirically. Theoretical work has modeled status in several ways, e.g. in terms of interdependent utilities (see e.g., Duesenberry, 1949; Frank, 1985; Bault et al., 2008), relative wealth concerns in reduced-form models (Cole et al., 1995), relative income concerns (Neumark and Postlewaite, 1998) and last-place aversion (Kuziemko et al., 2014). Maccheroni et al. (2012) provide a theoretical framework for the analysis of interpersonal comparison of preferences and establish a behavioral foundation for preference functionals that incorporate relative outcome concerns. Empirical studies documenting relative income concerns have been conducted both in the lab and in the field (e.g., Carlsson et al., 2007; Daly et al., 2013).

But why do human beings seem to care so much about how they fare in the "social race"? So called social comparison theory suggests that they do it in order to use the comparison with others to evaluate their own opinion and abilities: upward comparisons are motivated by self-improvement, whereas the opportunity to compare with a less fortunate other raises subjective well-being (Bault et al., 2008).[2] The link between one's own status perception and her subjective well-being is likely to pass through *socially competitive emotions*, i.e. emotions that directly involve social comparison, such as envy and gloating (Bault et al., 2008). As noted by Charness et al. (2014), further explanations include the desire for dominance in competition (Charness and Rabin, 2002), self-image motives (Bénabou and Tirole, 2006), public recognition (Moldovanu et al., 2007) and the joy of out-performing others (Dohmen et al., 2011).

In essence, then, it seems that people care about status as they believe that *higher status* –

[2] As they observe, "Social actions, such as consumption, are used to communicate to others a signal about some private information that is relevant for the social ranking of the individual. The social signal has to be costly, or else it could be easily mimicked. For instance, according to Veblen, conspicuous consumption has to be wasteful" (p.1).

via socio-psychological channels such as feeling worthy of receiving esteem and respect by others and/or avoiding negative emotions such as shame, usually attached to low status – buys *more happiness* (or subjective well-being). Clark and Oswald (1996) offer evidence showing that workers' reported satisfaction levels are inversely related to their comparison wage rates. Similarly, Luttmer (2005) finds that "lagging behind the Joneses" in terms of earnings is associated with lower levels of self-reported happiness and argues that this effect is likely caused by a psychological externality.[3]

Next, an individual's social status is likely to significantly influence not only her subjective well-being but also her behavior within various domains. Ranking concerns have been empirically investigated both in the field and in the lab and have been shown to affect women's employment decisions (Neumark and Postlewaite, 1998) and likelihood that they "keep the baby" when they become pregnant (Kearney and Levine, 2014) as well as individuals' willingness to engage in charitable giving (Glazer and Konrad, 1996) and in unethical activities (Charness et al., 2014). The status motive is likely to play a role also in individual suicide risk (Daly et al., 2013), in violent crime, especially among males,[4] and with regard to education performances: low-achieving students turn out to achieve better results when they are not the only low-achieving student in the classroom (Hoxby and Weingarth, 2005). Even in poor environments such as rural India, household decisions are often affected by status considerations, which induce poor families to spend an enormous amount of money for their daughter's marriage, as wedding celebrations – when the future husband is from a higher status family – are a signal of the enhanced status of the bride's family (Bloch et al., 2004).

Although consensus over the broad idea that relative position matters has been increasing over time, it is not so clear which *dimension(s)* of relative standing ought to be considered: relative standing *in terms of what*? As we anticipated above, most economics studies concentrate on relative

[3] Recent neuroscientific studies exploring the impact of social comparisons on reward-related activity in the human brain (Fliessbach et al., 2007; Dohmen et al., 2011) provide further support to this idea.

[4] As suggested by Kuziemko et al. (2014), a status motive such as (what they call) "last-place aversion" might contribute to explain why prior work found that criminal activity increased among boys who moved to better neighborhoods: these boys now attend better schools, where it is more likely that they are at the bottom of the classroom distribution.

income and wages (e.g., Gerdtham and Johannesson, 2004; Luttmer, 2005).[5] As far as objectively measured social status is concerned, in our empirical analysis we take a broader approach and, as we explain in Section 3, we look at individuals' social status more comprehensively, by including in it not only income, but also wealth, education and occupational status.[6]

2.2. Personality traits

The power of individuals' cognitive ability in predicting their social and economic success is well documented. In recent years, economists, psychologists, and sociologists have been taking a complementary road, by actively examining determinants of social and economic success that go beyond those captured by cognitive ability (Borghans et al., 2008). In particular, it is plausible to believe that also non-cognitive features related to an individual's personality may significantly affect both her *actual* success in life and her *perception* of it. However, little can be found so far in the empirical literature in order to specifically shed light on the complex, intricate interplays between objectively measured social status, perceived social status and personality traits.

Personality psychology is the branch of psychology that aims to describe the whole person, considering both universal traits and individual differences. Roberts (2009) defines personality traits as "the relatively enduring patterns of thoughts, feelings, and behaviors that reflect the tendency to respond in certain ways under certain circumstances" (p.140). We will exploit this stability and the individual differences in personality to understand the role played by personality traits in individuals' self-assessment of social status. Next, we will also pay attention to the relationship between personality traits and objectively measured social status.

In the empirical literature, some studies tested the general hypothesis that personality traits play an important role in people's success in life, affecting their socio-economic condition and, therefore, their actual location on the social ladder. Some prior research on the theme was based on

[5] It is also worth noting that, as pointed out by Neumark and Postlewaite (1998), there is a broad array of specific forms that a relative income concern may take: a concern with how far one is from the top of the income distribution, how far from the bottom, or one's percentile rank in the distribution.

[6] Di Tella et al. (2010) look at (objective) status by assessing it by means of a measure of the status attached to each job depending on the skills it requires. Their findings indicate that, controlling for changes in income, individuals report higher happiness when they obtain a job that is deemed more prestigious. The construction of objective, multidimensional measures of status dates back to pioneering work conducted by Hollingshead, who later proposed a "Four Factor Index of Social Status" based on education, occupation, sex, and marital status (Hollingshead, 1975).

the effects on achievement and vocational success of the interaction between personality traits and cognitive abilities and emphasized the role of a personality trait such as conscientiousness (Jensen, 1998). Recent work specifically investigated the impact of personality on key components of actual status, such as economic success, education and occupational status. Almlund et al. (2011) focus on personality traits as predictors of several outcome variables including academic and economic success and document that personality measures are as predictive as cognitive measures, even after controlling for family background and cognition (see on this also Becker et al., 2012). As to the effect of personality on earnings, Drago (2011) draws on previous work on the theme and shows that individuals' self-esteem – i.e., the perception that individuals have about their own ability – has a large causal impact on their earnings. Proto and Rustichini's (2012) empirical study reveals that personality traits such as openness, conscientiousness and extraversion significantly increase income. Next, Caliendo et al. (2014) find that several personality characteristics significantly affect entry into self-employment and survival of self-employed persons, documenting that the explanatory power of non-cognitive skills is comparable to that of education, which is one of the key determinants of entrepreneurship.

In the management and psychology literature, the so called "Big Five" model (Costa and McCrae, 1992) is one of the most commonly used taxonomies to represent the personality domain (Deck et al., 2008). This framework is based on a five-factor structure and, at the broadest level of abstraction, the five key factors are traditionally labeled as: (i) openness to experience; (ii) conscientiousness; (iii) extraversion; (iv) agreeableness; and (v) neuroticism.[7] The Big Five model provides us with a comprehensive categorization of personality traits: in Appendix Table A1 we report a general definition of the five factors taken from the APA Dictionary of Psychology and the personality facets (i.e., more narrowly defined traits) associated with them in our analysis. This model posits that the score of an individual in these dimensions characterizes her stable pattern of thoughts and feelings (Rustichini et al., 2012).

Subsequent research offered evidence that most of the variables used to assess personality traits in scholarly work in the field of personality psychology can be mapped into one or more of the dimensions of the Big Five (John, 1990; Costa and McCrae, 1992; Goldberg, 1993). Moreover, Costa and McCrae (1992) argue that the Big Five theory can be interpreted as the longitude and latitude of personality traits, by which all more narrowly defined traits (often called 'facets') may be categorized. However, in our work we will stick to the more common approach to the Big Five framework assuming that each personality aspect is associated to one trait only. This approach is

[7] From the initial letters of the five factors, the Big Five model is also called with the acronym OCEAN.

also suggested for our survey data in Smith et al. (2013).

3. Data

Our analysis is based on data from the US *Health and Retirement Study* (HRS), a biannual panel survey on a representative national sample of the American population aged 50 or more. HRS was designed to obtain detailed information regarding the dynamics of retirement and how retirement interacts with health, health insurance, and economic well-being. The survey provides detailed information on a wide range of domains such as demographics, health status, housing, disability, employment history and net worth, painting a comprehensive picture of the cohorts under study.

HRS is made of a core part available since the introduction of the survey (in 1992), plus further sections that have been added over time. In this study we focus our attention on the "psychosocial and lifestyle" section. This module was introduced in 2004, and included personality variables since 2006. For this reason, the analysis presented in this paper is based only on the last four waves (from 2006 to 2012) available at the time of writing. In every wave questions of the "psychosocial and lifestyle" module are asked to a rotating 50% of the full sample, which means that the same household fills in the module every four years. Therefore, a typical household in our sample answers twice to the same questions: in 2006 and 2010, or in 2008 and 2012. Overall we have 16,516 observations on 9,979 households. We focus on individuals with full information on all the variables under investigation and in the 50-80 age range, which is important because individuals in this age group have stable personality traits (Terracciano, et al., 2006; Cobb-Clark and Schurer, 2012).

3.1. Summary statistics

The target variable for this study is the subjective evaluation of an individual's own position on the social ladder (i.e., her Subjective Socio-Economic Status; hereafter, SSES). The variable originates from the following question of the HRS psychosocial module:

> *"Think of this ladder as representing where people stand in our society. At the top of the ladder are the people who are the best off – those who have the most money, most education, and best jobs. At the bottom are the people who are the worst off – who have the least money, least education, and the worst jobs or no jobs. The higher up you are*

on this ladder, the closer you are to the people at the very top and the lower you are, the closer you are to the people at the very bottom."

The answer has to be provided by drawing a cross on one of the ten rungs in a picture of a ladder, giving the individuals a simple, intuitive and clear way to immediately understand what the question asks, by somehow visualizing the entire society and her own position at the same time. Moreover, it is worth stressing that the question makes people think about their position explicitly by mentioning (and therefore making salient) three objective dimensions such as *money*, *education*, and *jobs*. We should then expect that a rational agent indicates a rung of the ladder coherent with these dimensions. Our first goal is to understand whether the self-assessed position in the social ladder correlates with personality traits, after controlling for the observable information on income, wealth, education, and occupation. The Big Five personality traits are built as five indexes (openness, conscientiousness, extraversion, agreeableness, and neuroticism) from the answers to a question asking to report how well each of 26 adjectives fits the respondent. The procedure is taken from Smith et al. (2013); for details see the Appendix.

Table 1 reports summary statistics on the variables used in this analysis, together with the polychoric correlation[8] of each variable with the SSES index. We divide the explanatory variables in three groups: social, control and personality variables. The first group is meant to collect all the "objective" dimensions that should characterize one's actual positioning in the social ladder (that is, income, wealth, education, and occupation).[9] Control variables include basic demographic information (age, gender, race, etc.), as well as information on (subjective and objective) health status and experienced past traumas. We include these variables (for details see the Appendix) as we believe that health and negative life events may bias one's (subjective and objective) social status.[10]

As we can see from Table 1, all the variables show significant degrees of correlation apart from the year dummies. Correlations of SSES are of course high with the social variables, but also with self-assessed health status. They are also generally high with the personality traits: we notice

[8] We use polychoric correlation because the variables involved in the analysis are discrete.

[9] All monetary values are reported to 2010 prices. Inflation adjustments are made using the BLS Consumer Price Index, all urban consumers, all items (annual average).

[10] Several studies have documented that negative life events (such as losing a child, having a life-threatening illness and suffering a physical loss) can produce adverse (direct and indirect) economic consequences later in life (e.g., Boden et al., 2001; Knodel and Im-em, 2004).

that people who are more open, conscientious, extraverted and agreeable on average report a higher position on the social ladder. On the contrary, individuals with a higher neuroticism index declare a lower position.

At the end of Table 1 we report summary statistics for SSES and for a variable that we label Objectively measured Socio-Economic Status (hereafter, OSES). This index is drawn from a factor analysis with polychoric correlation, drawn separately for each wave, that takes as explanatory variables: the degree of education (college, high school, lower), the employment status (self-employed, employee, other), and the logs of income, financial and real wealth.[11] This variable should provide us with an "objective" measure of social status, or at least a measure coherent with the HRS "social ladder" question that, as we noted above, explicitly mentions these variables.[12] We rescaled the OSES index to have the same average as SSES. Reassuringly, OSES is also highly – although not extremely – positively correlated with SSES (+39.9%).

We can interpret the correlations of Table 1 as a preliminary indication that the self-evaluation of an individual is linked with her socio-economic characteristics as well as with her personality traits. However, these correlations may be spurious, as we are not controlling for observable characteristics that in turn may influence individuals' social ladder positioning. The purpose of the next section is then to explore more in depth the connection between self-assessed social status and personality variables, by means of regression analyses that also control for observable characteristics of an individual.

TABLE 1 ABOUT HERE

4. Empirical analysis

The complex net of relations tying together SSES, OSES and personality traits is sketched in Figure 1. Socio-economic status, measured with either a self-reported evaluation by the individual (SSES) or an index constructed on economic variables (OSES), is influenced by personality. The effect of personality is likely different depending on the social status measure that we consider: personality acts as a lens that distorts the *perception* of the individuals if we consider SSES, while it

[11] The factor is mostly determined by income and wealth, as it is highly correlated (0.99) with an alternative indicator drawn from factor analysis but excluding information on education and occupation. In other words, as to objectively measured social status, we see that in our data individuals' social status is well captured by their economic status.

[12] These dimensions are consistent with the classic Four Factor Index of Social Status proposed by Hollingshead (1975).

affects *behavior* (e.g., impacting outcome variables such as educational attainment and professional success), if we analyze OSES. It follows that the two measures are then tightly linked via personality traits. In order to better understand these relations, we have estimated some regression models with different specifications.

We start in Sub-section 4.1 with an analysis on the link between SSES and personality. In Sub-section 4.2 we further look at the difference between those individuals who overestimate and those who underestimate their social status. In Sub-section 4.3 we study the relationship between OSES and personality and, finally, in Sub-section 4.4, we wonder how this may influence SSES. All the analyses are drawn from OLS or probit regressions with standard errors clustered at the household level to account for possible correlations across observations from the same household.

4.1. Subjective social status

Columns (1)-(3) of Table 2 report the output of several OLS regressions where the dependent variable is SSES. The first model, reported in Column (1), takes as regressors only the socio-economic variables mentioned in the social ladder question. This basic regression tells us that, as expected, the socio-economic variables are highly relevant: better-educated, self-employed and richer individuals report themselves higher on the ladder.

In Column (2) we enrich the specification by also adding socio-demographic variables. The results about the variables already used in Column (1) are in large part confirmed, both for the magnitude and the significance of the effects. As for the newly added explanatory variables, Column (2) tells us that older, married individuals and individuals declaring very good health report higher status. In contrast, women, individuals with poor health status or who suffered from some sort of trauma during life – in particular during childhood or adolescence – report lower SSES. It is interesting to notice that self-reported good health seems the variable with the highest impact on perceived social status. This result may indicate that some common factors that affect both types of self-evaluation can be at play. In other words, the strong effect of self-rated health on self-reported social status can spring from some omitted variable that might explain the general predisposition of the individual in self-rating herself.

To try and discover what can affect the perception of individuals, in Column (3) we insert in the specification also the Big Five personality traits. The results are in line with what we expected. As we have conjectured in previous sections, the personality of an individual is important to explain her own status perception. In support of this, we notice that the R-squared statistic increases considerably once we insert the Big Five variables in the regression (much more than after adding the nine socio-demographic variables in Column (2).) As our preliminary analysis suggested, traits

like openness, conscientiousness and extraversion have a positive and highly significant effect; agreeableness and neuroticism on the other hand display a negative but still significant effect. The signs of the coefficients are identical to those from descriptive statistics in Column (1), with the exclusion of agreeableness that is now negative because we control for other socio-economic and demographic characteristics. The effect of the remaining socio-economic characteristics is similar to our previous regressions, with the main exception of the self-assessed health status that is now much lower. This supports our previous argument that the coefficient in Column (2) was biased by the omission of personality variables. This means that inserting the personality of the individuals among the explanatory variables adds information to the basic specification, but does not interfere with it.

As a robustness check we also tried to investigate if other personality dimensions (beside the Big Five traits) could be relevant in determining the bias in social ladder perception. We constructed these variables from HRS following Smith et al. (2013). Personality variables not related to the Big Five model, like pessimism, hopelessness and hostility, turn out to be significant, decreasing only in part the predictive power of the Big Five variables. Although the analysis loses nearly 2,000 observations when incorporating these further personality dimensions, the main results are nonetheless confirmed – apart from the conscientiousness variable, whose effect is now absorbed by other dimensions. The full regression output is shown in Appendix Table A2.

TABLE 2 ABOUT HERE

4.2. Upward and downward bias in status perception

Who is more likely to overestimate her position in the social ladder? In this sub-section we extend our previous analysis to the study of the characteristics that correlate with the tendency to over- or under-estimate one's own social status. In particular, we conjecture that people overestimating their position may have different personality traits compared to people underestimating their position. For this purpose we split the sample in two groups, based on the outcome of the regression in Column (1) of Table 2. The residual from such regression informs on the deviation of SSES from its objective socio-economic determinants: a positive residual means that the individual is overestimating her social status (i.e. an *upward bias* occurs), while a negative residual means that she is underestimating her social status (*downward bias*).

Column (4) of Table 2 shows average marginal effects from a probit regression where the specification is identical to that of Column (3), but the dependent variable is a dummy equal to 1 if the individual is found to overestimate her social status (i.e., the residual is positive) and 0

otherwise. The results suggest that marital status, age, gender and self-reported health have a strong effect on the probability of overestimating social status. For example, reporting to be in a very good health status increases the probability of upward bias by nearly 6%. Importantly, personality seems to play a key role also in this case. The pattern is the same as in previous analyses: openness, conscientiousness and extraversion have positive effects, while agreeableness and neuroticism have a negative effect. In this case the interpretation of the effects is quite different, though. Now personality does not increase or decrease the perception of the status but determines a larger or smaller probability of misinterpreting the real status. As an example, a person who is open to experience has a larger probability (11% higher for each point on a 1-4 scale) to overestimate her real status and report a level on the social ladder that is above what it should have been.

After this analysis, we have some indication that the two groups are different in terms of socio-demographics but also personality and economic situation. In Table 3 we report a set of mean-comparison tests that examine, variable by variable, the difference between the two subsamples. Regarding the socio-economic variables, we find that people who tend to overestimate their position are better ranked in terms of both money and education. Among the individuals more inclined to underestimate themselves we find a higher fraction of females, immigrants, non-white, and people with chronic diseases or who suffered from life traumas. We also find that people overestimating their position are in general older and more frequently they report good health status (the average fraction of persons in good health in the upward bias subsample is 50.6%, 20% higher than in the other sub-sample). Finally, regarding personality, the two groups also display significant differences. The pattern is similar to what we found before, but not identical. Those individuals whose own status perception is biased upwards are higher on openness, conscientiousness, extraversion and agreeableness and lower on neuroticism. Once again, the sign of the agreeableness coefficient is in contrast with our regression output; this is the consequence of looking at each variable separately without controlling for other dimensions.

TABLE 3 ABOUT HERE

4.3. Objectively measured social status

As we noted above, the alteration of the individual's perspective might not be the only channel through which personality affects her social status. It is in fact plausible that some characteristics of personality operate through the behavioral channel and affect the probability to gain levels in the actual social ladder. As we observed in Sub-section 2.2., by focusing on the key components of objective social status, prior research has provided some support to this hypothesis.

For example, more open people may be more active and successful when searching for a job (e.g., Barrick and Mount, 1991; Boudreau et al., 2001). More conscientious individuals may be more committed to their studies, allowing them to obtain higher education (Noftle and Robins, 2007). People who are more agreeable and neurotic can be weaker and too unstable when it is time to "fight" for a promotion or a better job. In this sub-section we therefore explore the existence of a second channel that links personality to the actual social ladder positioning through a connection between personality and real life outcomes.

In the first two columns of Table 4 we report the results of OLS regression where the dependent variable is our objective measure of social status OSES. In order to obtain clear results, the explanatory variables for these regressions include only socio-demographics (without economic variables, i.e., those that we used in the factor analysis to construct OSES.) From Column (1) we find that the level of OSES increases with age and is higher for married individuals. Females, immigrants, non-white individuals and people with chronic diseases report lower OSES, while reporting very good health condition significantly boosts the level of social status. It then seems important not only to be healthy, but also to *feel* healthy. Having suffered from life traumas (especially in childhood) also decreases OSES. Finally, the year of the survey turns out to be relevant, too. It seems that the objective socio-economic position lowers with time. This result suggests that either the effect of ageing cleaned of the cohort effect is negative, or more simply that the recent financial crisis has determined the worsening of the economic situation for many individuals.

In Column (2) of Table 4 we report the estimation of the model in which we add the five variables representing the Big Five factors of personality. It turns out that personality traits are tightly linked also to the objectively measured status. Individuals who are higher on openness and conscientiousness achieve higher status;[13] in contrast more extraverted, agreeable and neurotic persons achieve lower status. The signs of the personality traits are the same as those on the correlation with SSES, with the only exception of extraversion. Therefore, on the whole, we find that extraversion has a positive effect on SSES and a negative effect on OSES. It is plausible to think that individuals who are too extraverted do not fit well in a team work and in general in a working environment that requires obedience to authority, or they are not enough committed and focused on the assigned tasks. This result differs from the one on extraversion reported by Proto and

[13] These findings are broadly consistent with the results illustrated by Jensen (1998), documenting an effect of conscientiousness on academic and vocational success, and by Proto and Rustichini (2012), showing that conscientiousness and openness positively affect income.

Rustichini (2012), who offer evidence that this trait positively influences income. Finally, the basic socio-demographics we inserted in the models remain significant and the effects are similar to what we have found in the basic specification. Female, non-white and immigrate individuals display lower status; older and married individuals display higher status.

4.4. Subjective and objectively measured social status

As a final step in our analysis we put together the variables of interest illustrated so far, in order to paint a comprehensive picture of the links between personality traits, objectively measured social status and subjective social status. Back to our scheme of Figure 1, we now aim to link SSES with OSES. In Column (3) of Table 4 we report an OLS regression similar to the one shown in Column (3) of Table 2, where we replace all the socio-economic variables with OSES (which originates from them.) The results confirm that OSES is the most important factor that can explain self-assessed social status. The pattern of effects of the socio-demographics is similar to the previous regression, and overall the explanatory power of the regression is not too penalized by the fact that here we are summarizing all the relevant economic determinants through a single index. Personality still shows to have a large and significant effect.

As we have seen so far, the OSES and SSES measures are both affected by the personality traits of the individual answering the questionnaire. It is therefore possible that the previous OLS regression shown in Column (3) suffers from a bias due to the endogeneity of the OSES variable. To formalize this, let us define X a vector of observed exogenous explanatory variables and $\varepsilon = (\varepsilon_S, \varepsilon_O)$ as unobserved error processes, possibly correlated with each other. Consider a triangular structural model of the form

$$SSES = X\beta_1 + OSES\gamma + \varepsilon_S \quad (1)$$

$$OSES = X\beta_2 + \varepsilon_O . \quad (2)$$

Estimation of equation (1) may give rise to biased OLS results because OSES is an endogenous variable. In order to solve this problem we use an instrumental variable approach that will ensure clearer and unbiased results (provided that the instruments used are valid). We estimate the model based on the approach of Lewbel (2012). The technique allows to artificially create instruments for the first stage equation, and is useful when the IV model otherwise does not meet the order condition for identification – that is, when there are no valid instruments available (as in our case.)

Lewbel (2012) suggests to run the first stage regression of the endogenous variable on all exogenous variables (that is, to estimate equation (2)) and then generate instruments Z as the

residuals $\widehat{\varepsilon_O}$ multiplied by each exogenous regressor in mean-centered form,

$$Z = \left(X - \overline{X}\right)\widehat{\varepsilon_O} \,. \tag{3}$$

Identification is achieved by imposing that $Cov\left(X, \varepsilon_O^2\right) \neq 0$ and $Cov\left(X, \varepsilon_S \varepsilon_O\right) = 0$.[14] In the presence of heteroskedasticity in the error process, *Z* is correlated with OSES; the correlation is higher the greater the degree of heteroskedasticity. The estimator works well in simulations and empirical applications (Lewbel, 2012), although it is less precise than an IV estimator obtained from standard exclusion restrictions. The results of the second stage regression, reported in Column (4) of Table 4, are reassuring. The vast majority of the effects are confirmed, and only the marginal effect of OSES decreases considerably. However, it is still significant. It is worth noting that personality still displays not only the same sign but also a similar magnitude of the coefficients. This result provides further evidence that indeed the concepts of personality, subjective and objectively measured social status are tightly linked together. They influence each other in a significant way, and omitting one of them may introduce a non-negligible bias in the analysis.

TABLE 4 ABOUT HERE

5. Concluding remarks

In this paper we wondered whether an individual's social status is influenced by her personality traits. Results from our regression analysis suggest that a large number of individual objective characteristics are significantly related to one's self-assessment in the social ladder. Age and gender play an important role in determining how an individual self-evaluates herself; married individuals and people in good health are more likely to report higher social ladder levels. Importantly but not surprisingly, perceived social status is highly correlated with the variables that are usually viewed as the key objective dimensions of socio-economic status, that is the level of education, the amount of income and wealth, and occupational status. Moreover the subjective socio-economic status measure (SSES) is positively correlated with such personality traits as openness, conscientiousness and extraversion and negatively correlated with such traits as agreeableness and neuroticism. We find similar effects on the probability to overestimate or underestimate her own position in the social ladder.

SSES is also positively but not highly correlated (the correlation is 0.40) with an objective

[14] Lewbel (2012) shows that these restrictions are common in models featuring endogeneity or mis-measurement.

measure of social status (OSES) derived from information on income, wealth, education and occupation, i.e., the dimensions explicitly mentioned by the HRS social ladder question that is central for our analysis. We therefore also explored the link between objectively measured socio-economic status and the personality of individuals. The results confirm that there is a significant relationship between them: a more conscientious and open person has higher OSES while a more extraverted, agreeable and neurotic person has lower OSES.

As a final step of our exploration of the net of relations between personality and social status, we inserted OSES in a regression of SSES, where we found that it has indeed the expected positive effect. More interestingly, we showed that the five traits describing the personality of an individual are also relevant and, actually, heavily affect one's perception of her position in the social ladder. Specifically, traits such as openness, conscientiousness and extraversion increase the personal evaluation of one's own position on the social ladder, while agreeableness and neuroticism lead people to report a lower status. It is important to notice that in the last regression a problem of endogeneity could arise since personality affects both the dependent (SSES) and an explanatory variable (OSES). To address this problem we estimated an IV regression based on the approach of Lewbel (2012). The results are all confirmed even with this specification.

The main message we can take out of the analyses we carried out in this paper is that non-cognitive factors such as individuals' personality traits are important to shape both objective and subjective socio-economic status indicators. On the whole, a dual channel through which personality affects self-perceived status seems to be at work: a direct, *perception-based* channel through SSES and an indirect, *behavioral* channel through OSES.

On more general grounds, this evidence offers further support to the idea that subjective and objective measures of status provide independent information, so that future empirical research on social status may benefit from the simultaneous recourse to the two indicators and obtain new, insightful results on the relationship between social status and economically relevant variables.

Next, we claim that shedding light on new determinants of status concerns is important as knowing where people believe that they are positioned in the social ladder is relevant for our understanding of economic phenomena such as, e.g., labor supply or aggregate consumption and savings patterns. Moreover, one's self-ranking perception is likely to directly and significantly shape one's preferences for redistributive policies (Alesina and Giuliano, 2010), which in turn are likely to impact one's voting behavior. Our result has implications also for the happiness literature. In this stream of research, recent work shows that personality traits mediate the complex relationship between income and life satisfaction (Proto and Rustichini, 2012). In this regard, insofar as one's perception of her own position in the social ladder influences her happiness, our

finding would imply that subjective social status is a further channel through which personality traits might affect individual happiness. This theme is left as an interesting avenue for future research.

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Appendix: Health, trauma and personality scores

a) Health

The "self-assessed good health" variable originates from the following question:

"Would you say your health is excellent, very good, good, fair, or poor?"

Possible answers are: "Excellent", "Very good", "Good", "Fair" and "Poor". We consider a dummy variable equal to 1 if the answer to the previous question is "Excellent" or "Very good".

The "chronic diseases" variable originates from the following list of questions on chronic diseases:

"Has a doctor ever told you that you have cancer or a malignant tumor, excluding minor skin cancer?"

"Has a doctor ever told you that you have high blood pressure or hypertension?"

"Has a doctor ever told you that you have diabetes or high blood sugar?"

"Has a doctor ever told you that you have chronic lung disease such as chronic bronchitis or emphysema?"

"Has a doctor ever told you that you have had a heart attack, coronary heart disease, angina, congestive heart failure, or other heart problems?"

"Has a doctor ever told you that you have had a stroke?"

"Have you ever had or has a doctor ever told you that you have any emotional, nervous, or psychiatric problems?"

"Have you ever had, or has a doctor ever told you that you have arthritis or rheumatism?"

Possible answers to each item are: "Yes", "Disputes previous wave record, but now has condition", "Disputes previous wave record, does not have condition" and "No". We consider a dummy variable equal to one if at least two of the eight chronic diseases have ever been experienced, i.e., if the respondent answered "Yes" to at least two of the above questions. We chose to consider the presence of at least two, rather than just one, chronic diseases to have more heterogeneity in this dimension. In fact, in our sample nearly 88% of the respondents answered "Yes" to at least one of the above questions. Moreover, only individuals with two or more chronic diseases less frequently self-assess good health status in our data.

b) Traumas

The "life traumas" variable originates from the following question:

"For each of the following events, please indicate whether the event occurred at any point in your life. If the event did happen, please indicate the year in which it happened most recently.

Has a child of yours ever died?

Have you ever been in a major fire, flood, earthquake, or other natural disaster?

Have you ever fired a weapon in combat or been fired upon in combat?

Has your spouse, partner, or child ever been addicted to drugs or alcohol?

Were you victim of a serious physical attack or assault in your life?

Did you ever have a life-threatening illness or accident?

Did your spouse or a child of yours ever have a life-threatening illness or accident?"

Possible answers to each item are: "Yes" and "No". Following Smith et al. (2013), our variable is the sum of the events arisen.

The "early life traumas" variable originates from the following question:

> *"For the next set of events, please think about your childhood growing up, before you were 18 years old.*
> *Before you were 18 years old, did you have to do a year of school over again?*
> *Before you were 18 years old, did either of your parents drink or use drugs so often that it caused problems in the family?*
> *Before you were 18 years old, were you ever physically abused by either of your parents?"*

Possible answers to each item are: "Yes" and "No". Following Smith et al. (2013), our variable is the sum of the events arisen.

c) Personality

Personality scores are constructed from the following question:[15]

> *"Please indicate how well each of the following describes you.*
> *[a] Outgoing*
> *[b] Helpful*
> *[c] Moody*
> *[d] Organized*
> *[e] Friendly*
> *[f] Warm*
> *[g] Worrying*
> *[h] Responsible*
> *[i] Lively*
> *[j] Caring*
> *[k] Nervous*
> *[l] Creative*
> *[m] Hardworking*
> *[n] Imaginative*
> *[o] Softhearted*
> *[p] Calm*
> *[q] Intelligent*

[15] Since 2010 the question includes five more items: "Reckless", "Self-disciplined", "Impulsive", "Cautious" and "Thrifty". We exclude them from the analysis as they are not available for the whole sample.

[r] Curious

[s] Active

[t] Careless

[u] Broad-minded

[v] Sympathetic

[w] Talkative

[x] Sophisticated

[y] Adventurous

[z] Thorough"

Possible answers to each item are: "A lot", "Some", "A little" and "Not at all", to which we assign the value 4, 3, 2 or 1 respectively. We assign the reverse code to all items apart from [p] and [t]. Following Smith et al. (2013), scores are built as the average of the following items:

Openness: [l], [n], [q], [r], [u], [x], [y].

Conscientiousness: [d], [h], [m], [t], [z].

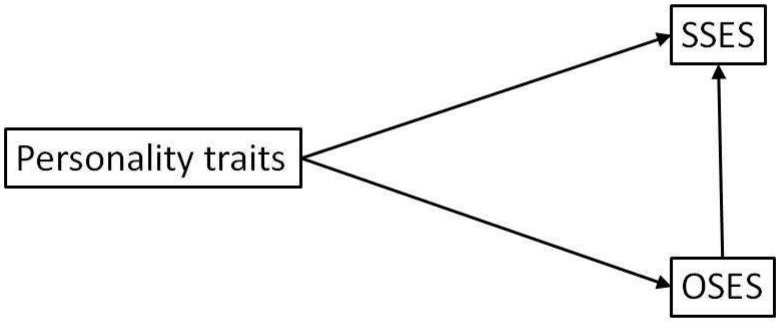
Extraversion: [a], [e], [i], [s], [w].

Agreeableness: [b], [f], [j], [o], [v].

Neuroticism: [c], [g], [k], [p].

Each score is missing when more than half of the underlying items are missing.

Figure 1. Personality traits and socio-economic status



Note: SSES stands for Subjective Socio-Economic Status, while OSES stands for Objectively measured Socio-Economic Status.

Table 1. Summary statistics (16,516 observations)

Variable	Mean	Std. Dev.	Min.	Max.	Correlation with SSES
Social variables					
High school	0.187	0.390	0	1	0.226
College	0.104	0.305	0	1	0.399
Employee	0.296	0.456	0	1	0.027
Self-employed	0.090	0.287	0	1	0.156
Ln(income)	10.624	1.282	0	15.540	0.277
Ln(financial wealth)	8.092	4.591	0.668	17.308	0.334
Ln(real wealth)	10.918	3.200	0.668	18.295	0.280
Home owner	0.846	0.361	0	1	0.273
Control variables					
Age/10	6.685	0.759	5	8	0.062
Female	0.597	0.491	0	1	-0.096
Non-white	0.157	0.364	0	1	-0.165
Immigrate	0.087	0.281	0	1	-0.078
Married	0.678	0.467	0	1	0.210
Self-assessed good health	0.451	0.498	0	1	0.307
Chronic diseases	0.643	0.479	0	1	-0.155
Life trauma	1.186	1.177	0	7	-0.082
Early life trauma	0.389	0.639	0	3	-0.153
Year 2008	0.256	0.437	0	1	-0.017
Year 2010	0.249	0.432	0	1	0.009
Year 2012	0.211	0.408	0	1	-0.053
Personality variables					
Openness	2.950	0.548	1	4	0.280
Conscientiousness	3.388	0.469	1	4	0.225
Extraversion	3.201	0.553	1	4	0.237
Agreeableness	3.531	0.477	1	4	0.096
Neuroticism	2.023	0.606	1	4	-0.236
Socio-economic status					
Subjective (SSES)	6.489	1.723	1	10	1
Objective (OSES)	6.489	1.541	-0.001	10.594	0.399

Note. Polychoric or polyserial correlation in the last column. All correlations are significantly different from zero at the 1% significance level, except for those involving year 2008 and year 2010 that are not significant at standard significance levels.

Table 2. Self-perception of social status: regression analysis

Dependent variable	**SSES**			**Pr. (overstate)**
Method	**OLS**	**OLS**	**OLS**	**Probit**
	(1)	**(2)**	**(3)**	**(4)**
High school	0.490***	0.465***	0.384***	-0.039***
	(0.035)	(0.034)	(0.033)	(0.011)
College	0.876***	0.809***	0.682***	-0.007
	(0.042)	(0.042)	(0.040)	(0.015)
Employee	-0.053*	0.011	-0.016	-0.011
	(0.031)	(0.034)	(0.032)	(0.010)
Self-employed	0.152***	0.148***	0.042	-0.042***
	(0.046)	(0.046)	(0.044)	(0.015)
Ln(income)	0.160***	0.143***	0.127***	0.007*
	(0.016)	(0.016)	(0.015)	(0.004)
Ln(financial wealth)	0.072***	0.058***	0.055***	-0.005***
	(0.004)	(0.004)	(0.003)	(0.001)
Ln(real wealth)	0.059***	0.048***	0.041***	-0.002
	(0.007)	(0.006)	(0.006)	(0.002)
Home owner	0.059	0.027	0.036	0.007
	(0.053)	(0.052)	(0.050)	(0.015)
Age/10		0.211***	0.174***	0.042***
		(0.022)	(0.021)	(0.006)
Female		-0.084***	-0.062**	-0.038***
		(0.028)	(0.029)	(0.009)
Non-white		0.073	-0.060	-0.036***
		(0.045)	(0.043)	(0.012)
Immigrate		0.011	0.046	-0.007
		(0.055)	(0.052)	(0.015)
Married		0.149***	0.175***	0.045***
		(0.034)	(0.032)	(0.010)
Self-assessed good health		0.403***	0.197***	0.058***
		(0.028)	(0.028)	(0.009)
Chronic diseases		-0.093***	-0.045	-0.009
		(0.030)	(0.029)	(0.009)
Life trauma		-0.042***	-0.058***	-0.014***
		(0.012)	(0.012)	(0.004)
Early life trauma		-0.167***	-0.132***	-0.032***
		(0.023)	(0.022)	(0.007)
Openness			0.400***	0.107***
			(0.030)	(0.009)
Conscientiousness			0.145***	0.035***
			(0.033)	(0.010)
Extraversion			0.379***	0.102***
			(0.031)	(0.010)
Agreeableness			-0.217***	-0.057***
			(0.035)	(0.011)
Neuroticism			-0.309***	-0.074***
			(0.024)	(0.007)
Year 2008	-0.093***	-0.085***	-0.097***	-0.016
	(0.033)	(0.033)	(0.031)	(0.010)
Year 2010	-0.037	-0.073***	-0.077***	-0.016*
	(0.028)	(0.028)	(0.027)	(0.009)
Year 2012	-0.075**	-0.127***	-0.125***	-0.039***
	(0.036)	(0.036)	(0.035)	(0.011)
Constant	3.386***	2.349***	1.480***	
	(0.157)	(0.233)	(0.261)	
Observations	16,516	16,516	16,516	16,516
R-squared	0.181	0.210	0.270	

Note. Column (4) reports average marginal effects on the probability to overstate socio-economic status. Under- and over- statement is based on the residuals from Column (1). Household-clustered standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Table 3. Under- and over- statement of social status: summary statistics

Sample	Overall	Understate	Overstate	Test
Social variables				
High School	0.187	0.189	0.186	-0.605
College	0.104	0.091	0.114	4.887***
Employee	0.296	0.297	0.294	-0.416
Self-Employed	0.090	0.087	0.093	1.162
Ln(Income)	10.624	10.549	10.687	6.934***
Ln(Financial Wealth)	8.092	7.950	8.212	3.660***
Ln(Real Wealth)	10.918	10.776	11.038	5.255***
Home owner	0.846	0.833	0.857	4.286***
Control variables				
Age/10	6.685	6.640	6.723	6.994***
Female	0.597	0.624	0.574	-6.539***
Non-white	0.157	0.167	0.149	-3.083***
Immigrate	0.087	0.091	0.083	-1.753*
Married	0.678	0.650	0.702	7.143***
Self-assessed good health	0.451	0.386	0.506	15.495***
Chronic diseases	0.643	0.669	0.621	-6.428***
Life trauma	1.186	1.239	1.141	-5.296***
Early life trauma	0.389	0.436	0.350	-8.652***
Year 2008	0.256	0.259	0.254	-0.598
Year 2010	0.249	0.246	0.251	0.804
Year 2012	0.211	0.220	0.203	-2.690***
Personality variables				
Openness	2.950	2.839	3.044	24.470***
Conscientiousness	3.388	3.320	3.445	17.284***
Extraversion	3.201	3.087	3.297	24.792***
Agreeableness	3.531	3.490	3.565	9.990***
Neuroticism	2.023	2.132	1.932	-21.515***
Socio-economic status				
Subjective (SSES)	6.489	5.105	7.654	140.00***
Objective (OSES)	6.489	6.406	6.559	6.367***
Observations	16,516	7,547	8.969	

Note. The last column reports the outcome of a two-sample t test on the equality of the mean in the two sub-groups; *** p<0.01, ** p<0.05, * p<0.1.

Table 4. Subjective and objective social status indicator: regression analysis

Dependent variable	**OSES**		**SSES**	
Method	**OLS**	**OLS**	**OLS**	**IV**
	(1)	**(2)**	**(3)**	**(4)**
OSES			0.332***	0.097***
			(0.011)	(0.030)
Age/10	0.139***	0.156***	0.148***	0.185***
	(0.017)	(0.017)	(0.019)	(0.019)
Female	-0.107***	-0.080***	-0.086***	-0.105***
	(0.026)	(0.027)	(0.029)	(0.030)
Non-white	-0.943***	-0.947***	-0.049	-0.272***
	(0.040)	(0.039)	(0.043)	(0.050)
Immigrate	-0.518***	-0.505***	0.057	-0.061
	(0.058)	(0.057)	(0.052)	(0.053)
Married	0.880***	0.874***	0.173***	0.378***
	(0.029)	(0.029)	(0.031)	(0.039)
Self-assessed good health	0.637***	0.539***	0.226***	0.352***
	(0.024)	(0.025)	(0.028)	(0.032)
Chronic diseases	-0.198***	-0.167***	-0.041	-0.080***
	(0.027)	(0.026)	(0.029)	(0.030)
Life trauma	-0.035***	-0.047***	-0.053***	-0.064***
	(0.010)	(0.010)	(0.012)	(0.012)
Early life trauma	-0.191***	-0.166***	-0.155***	-0.194***
	(0.019)	(0.019)	(0.022)	(0.023)
Openness		0.298***	0.485***	0.555***
		(0.027)	(0.030)	(0.032)
Conscientiousness		0.332***	0.146***	0.224***
		(0.030)	(0.033)	(0.035)
Extraversion		-0.086***	0.340***	0.320***
		(0.028)	(0.031)	(0.033)
Agreeableness		-0.180***	-0.237***	-0.279***
		(0.033)	(0.035)	(0.037)
Neuroticism		-0.050**	-0.311***	-0.323***
		(0.021)	(0.024)	(0.025)
Year 2008	-0.092***	-0.105***	-0.066**	-0.091***
	(0.026)	(0.026)	(0.032)	(0.032)
Year 2010	-0.280***	-0.291***	-0.005	-0.074***
	(0.021)	(0.021)	(0.027)	(0.028)
Year 2012	-0.585***	-0.594***	-0.005	-0.145***
	(0.031)	(0.030)	(0.035)	(0.039)
Constant	5.396***	4.312***	0.279	2.809***
	(0.121)	(0.180)	(0.208)	(0.251)
Observations	16,516	16,516	16,516	16,516
R-squared	0.279	0.301	0.258	0.227

Note. Column (4) reports the output of an IV regression based on the approach of Lewbel (2012), where heteroskedasticity-based instruments are generated from the data. Household-clustered standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Table A1. The "Big Five" personality traits

Personality Trait	**Definition from APA Dictionary of Psychology**	**Facets in HRS**
Openness	"The tendency to be open to new aesthetic, cultural, or intellectual experiences."	Creative Imaginative Intelligent Curious Broad-minded Sophisticated Adventurous
Conscientiousness	"The tendency to be organized, responsible, and hardworking."	Organized Responsible Hardworking (Not) Careless Thorough
Extraversion	"An orientation of one's interests and energies toward the outer world of people and things rather than the inner world of subjective experience; characterized by positive affect and sociability."	Outgoing Friendly Lively Active Talkative
Agreeableness	"The tendency to act in a cooperative, unselfish manner."	Helpful Warm Caring Softhearted Sympathetic
Neuroticism	"A chronic level of emotional instability and proneness to psychological distress. Emotional stability is predictability and consistency in emotional reactions, with absence of rapid mood changes."	Moody Worrying Nervous (Not) Calm

Table A2. Further personality traits: regression analysis

Dependent variable	**SSES**	**Pr. (overstate)**	**OSES**	**SSES**	
Method	**OLS**	**Probit**	**OLS**	**OLS**	**IV**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
OSES				0.291***	0.105***
				(0.011)	(0.033)
High school	0.366***	-0.044***			
	(0.032)	(0.011)			
College	0.615***	-0.028*			
	(0.040)	(0.015)			
Employee	-0.019	-0.008			
	(0.031)	(0.011)			
Self-employed	0.031	-0.041***			
	(0.042)	(0.015)			
Ln(income)	0.146***	0.011***			
	(0.015)	(0.004)			
Ln(financial wealth)	0.043***	-0.008***			
	(0.003)	(0.001)			
Ln(real wealth)	0.039***	-0.002			
	(0.006)	(0.002)			
Home owner	-0.041	-0.015			
	(0.050)	(0.015)			
Age/10	0.147***	0.038***	0.128***	0.113***	0.137***
	(0.021)	(0.007)	(0.017)	(0.019)	(0.019)
Female	-0.087***	-0.045***	-0.154***	-0.126***	-0.155***
	(0.029)	(0.010)	(0.026)	(0.029)	(0.030)
Non_white	-0.047	-0.037***	-0.856***	-0.029	-0.189***
	(0.044)	(0.013)	(0.040)	(0.044)	(0.051)
Immigrate	-0.009	-0.014	-0.246***	0.005	-0.040
	(0.053)	(0.016)	(0.057)	(0.054)	(0.054)
Married	0.110***	0.036***	0.633***	0.128***	0.246***
	(0.040)	(0.013)	(0.035)	(0.039)	(0.043)
Self-assessed good health	0.064**	0.029***	0.374***	0.088***	0.158***
	(0.028)	(0.009)	(0.025)	(0.028)	(0.030)
Chronic diseases	-0.007	-0.002	-0.129***	-0.003	-0.028
	(0.028)	(0.010)	(0.025)	(0.029)	(0.029)
Life trauma	-0.026**	-0.006	-0.051***	-0.022*	-0.031***
	(0.012)	(0.004)	(0.010)	(0.012)	(0.012)
Early life trauma	-0.093***	-0.024***	-0.133***	-0.113***	-0.138***
	(0.022)	(0.007)	(0.019)	(0.022)	(0.022)
Openness	0.356***	0.100***	0.215***	0.436***	0.476***
	(0.031)	(0.010)	(0.027)	(0.031)	(0.032)
Conscientiousness	0.044	0.013	0.224***	0.043	0.084**
	(0.035)	(0.011)	(0.031)	(0.035)	(0.036)
Extraversion	0.243***	0.071***	-0.132***	0.210***	0.185***
	(0.032)	(0.010)	(0.028)	(0.032)	(0.033)
Agreeableness	-0.254***	-0.072***	-0.248***	-0.278***	-0.324***
	(0.035)	(0.012)	(0.032)	(0.035)	(0.037)
Neuroticism	-0.095***	-0.023***	0.123***	-0.092***	-0.069**
	(0.026)	(0.008)	(0.023)	(0.026)	(0.027)

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Table A2. (Continued)

Dependent variable	SSES	Pr. (overstate)	OSES	SSES	
Method	OLS	Probit	OLS	OLS	OLS
	(1)	(2)	(3)	(4)	(5)
Life satisfaction	0.171***	0.040***	0.111***	0.173***	0.193***
	(0.012)	(0.003)	(0.010)	(0.012)	(0.013)
Social network	-0.021	-0.006	0.073***	-0.032	-0.018
	(0.024)	(0.008)	(0.022)	(0.024)	(0.025)
Hostility	-0.058***	-0.016***	-0.101***	-0.075***	-0.093***
	(0.015)	(0.005)	(0.012)	(0.015)	(0.015)
Optimism	0.003	0.006	-0.043***	0.005	-0.003
	(0.014)	(0.004)	(0.012)	(0.014)	(0.014)
Pessimism	0.007	0.003	-0.080***	-0.000	-0.015
	(0.016)	(0.005)	(0.014)	(0.016)	(0.016)
Hopeless	-0.109***	-0.031***	-0.109***	-0.117***	-0.137***
	(0.018)	(0.005)	(0.015)	(0.018)	(0.018)
Loneliness	0.061*	0.026***	0.031	0.074**	0.079**
	(0.032)	(0.010)	(0.028)	(0.032)	(0.033)
Personal constraints	-0.026	-0.007	-0.033**	-0.025	-0.031*
	(0.016)	(0.005)	(0.014)	(0.016)	(0.017)
Mastery	0.089***	0.020***	0.001	0.081***	0.081***
	(0.015)	(0.004)	(0.012)	(0.015)	(0.015)
Reciprocity	0.087***	0.022***	-0.047***	0.076***	0.067***
	(0.016)	(0.005)	(0.015)	(0.017)	(0.017)
Purpose in life	0.045**	0.008	0.015	0.049**	0.052**
	(0.020)	(0.006)	(0.017)	(0.020)	(0.020)
Year 2008	-0.204***	-0.038***	-0.164***	-0.179***	-0.210***
	(0.032)	(0.011)	(0.027)	(0.033)	(0.033)
Year 2010	-0.173***	-0.040***	-0.342***	-0.111***	-0.175***
	(0.029)	(0.010)	(0.023)	(0.029)	(0.030)
Year 2012	-0.221***	-0.057***	-0.582***	-0.127***	-0.235***
	(0.036)	(0.012)	(0.031)	(0.037)	(0.041)
Constant	0.976***		5.716***	1.796***	2.860***
	(0.297)		(0.217)	(0.253)	(0.316)
Observations	14,707	14,707	14,707	14,707	14,707
R-squared	0.318		0.318	0.306	0.288

Note. Column (2) reports average marginal effects on the probability to overstate socio-economic status. Under- and over-statement is based on the output of Table 2, Column (1). Household-clustered standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.